

# CHEMISTRY – SPECIALIZATION (SCIENCE) – BACHELOR OF SCIENCE (HONOURS)

## CHEM-P-BSH

**Subject:** Administered by the Department of Chemistry.

**Plan:** Consists of 90.00 units as described below.

**Program:** The Plan, together with sufficient electives to total 120.00 units, will lead to a Bachelor of Science (Honours) Degree.

Requirements for this program have been modified. Please consult the [2021-2022 Calendar](#) for the previous requirements.

Code	Title	Units
<b>1. Core</b>		
<b>A. Complete the following:</b>		
CHEM 112	General Chemistry	6.00
<b>B. Complete 6.00 units from the following: 6.00</b>		
PHYS 104	Fundamental Physics	
PHYS 106	General Physics	
PHYS 115	Introduction to Physics I	
& PHYS 116	and Introduction to Physics II	
<b>C. Complete 3.00 units from the following: 3.00</b>		
MATH 110	Linear Algebra	
MATH 111	Linear Algebra	
MATH 112	Introduction to Linear Algebra	
<b>D. Complete 6.00 units from the following: 6.00</b>		
MATH 120	Differential and Integral Calculus	
MATH 121	Differential and Integral Calculus	
MATH 123	Differential and Integral Calculus I	
& MATH 124	and Differential and Integral Calculus II	
<b>E. Complete the following:</b>		
CHEM 211	Main Group Chemistry	3.00
CHEM 212	Principles of Chemical Reactivity	3.00
CHEM 213	Introduction to Chemical Analysis	3.00
CHEM 221	Material, Solutions, Interfaces	3.00
CHEM 222	Methods of Structure Determination	3.00
CHEM 223	Organic Reactions	3.00
<b>F. Complete the following:</b>		
CHEM 311	Mechanistic Organic Chemistry	3.00
CHEM 312	Transition Metal Chemistry	3.00
CHEM 313	Quantum Mechanics	3.00
CHEM 321	Instrumental Chemical Analysis	3.00
CHEM 322	The Chemical Bond: Computation and Spectroscopy	3.00

CHEM 323	Biological Chemistry	3.00
CHEM 397	Experimental Chemistry	6.00

### G. Complete the following:

CHEM 497	Research Project	6.00
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### 2. Option

#### A. Complete 12.00 units from the following: 12.00

CHEM at the 400-level or above

CHEM\_Sub

#### B. Complete 9.00 units from the following: 9.00

CHEM at any level

CHEM\_Sub

### 4. Additional Requirements

A. A maximum of 12.00 units may be chosen from CHEM\_Sub.

### Electives

Elective Courses	30.00
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**Total Units 120.00**

## 5. Notes

A. A maximum of 6.00 units from courses offered by other Faculties and Schools may be counted toward the program and/or Plan Requirements. This includes courses in BMED, COMM, GLPH, LAW, NURS and courses in the Faculty of Engineering and Applied Science.

## Chemistry Course List

The following list contains courses offered through other Departments. In accordance with Academic Regulation 2.5 (Access to Classes), students do not have enrolment priority in all of these courses. Access to these courses may only be made available during the Open Enrolment period, and then only if space permits.

### CHEM\_Sub

Code	Title	Units
<b>Substitutions in the Chemistry Specialization Plan</b>		
BCHM 218	Molecular Biology	3.00
BCHM at the 300-level or above		